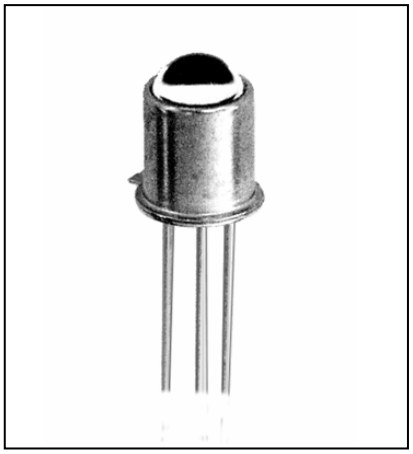
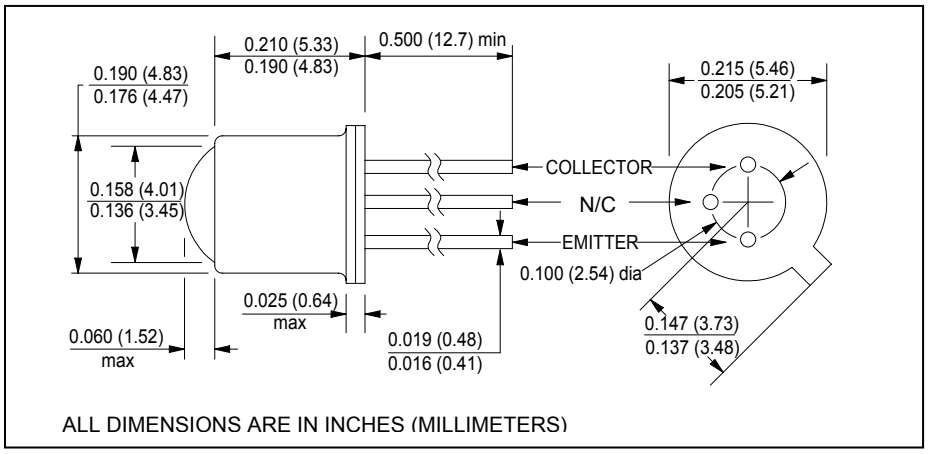
MCDT-435

NPN Silicon Phototransistor





Features

- ±9° acceptance angle
- custom aspheric lensed TO-18 package
- transistor base is not bonded
- tested and characterized at 660nm
- RoHS compliant

Description

The MCDT-435 is a silicon NPN phototransistor mounted in a TO-18 package which features a custom double convex glass-to-metal sealed aspheric lens. Narrow acceptance angle enables excellent on-axis coupling. The MCDT-435 is mechanically and spectrally matched to MCDE-435 LED.

absolute maximum ratings (T_A = 25°C unless otherwise stated)

storage temperature	-65°C to +150°C
operating temperature	-65°C to +125°C
lead soldering temperature[1]	260°C
collector-emitter voltage	30V
continuous collector current	50mA
continuous power dissipation[2]	250mW

notes:

1. 0.06" (1.5mm) from the header for 5 seconds maximum
2. Derate linearly 2.0mW/°C from 25°C free air temperature to T_A = +125°C.

electrical characteristics (T_A = 25°C unless otherwise noted)

symbol	parameter	min	typ	max	units	test conditions
I_L	Light current[3]	0.5	1.0	-	mA	V_{CE} = 5V, E_e = 0.5mW/cm^2
I_{CEO}	Collector dark current	-	-	25	nA	V_{CE} = 10V, E_e = 0
$V_{(BR)CEO}$	Collector-emitter breakdown	30	-	-	V	I_C = 100µA
t_r, t_f	Output rise and fall time	-	5.0	-	µs	I_C = 1mA, V_{CE}=5V, R_L=1kΩ.
θ_{HP}	Total angle at half sensitivity points	-	18	-	deg.	

notes: 3. Radiation source is a gallium arsenide phosphide LED operating at a peak emission wavelength of 660nm.

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